

## **BEACH MAT, CHAIR AND SHELTER**

### **FIELD OF THE INVENTION**

[0001] The invention is directed to a highly portable device that provides cushioned full length reclining as well as sitting backrest support in a device that is light and easily stowed and carried. The device may also incorporate a hood for shade in either the sitting or reclining modes.

### **BACKGROUND OF THE INVENTION**

[0002] Various recliner pad and cushions have been provided in the prior art. However they typically do not provide any shade for the user and are difficult to fold and carry. They can provide backrest support only by use in conjunction with a separate frame.

[0003] In a separate product category beach chairs have been provided. In some of these prior devices, the user extends a frame for backrest support. The frame carries webbing or fabric that supports the user's back. A fabric (unpadded) seat rectangle is attached to the frame. The user sits on the seat rectangle with anchors the backrest. However, the seat rectangle is unpadded and provides only minimal protection from the surface. Therefore these beach chairs are unsuitable for use on hot or hard surfaces. Typically no provision is made for shading the user.

### **SUMMARY OF THE DISCLOSURE**

[0004] The invention solves the deficiencies of prior art devices by providing a device with three zones. The invention can be used in a reclining or seated mode. In the reclining mode the three zones are extended on the ground to cushion at least

the users torso and head and to provide protection for the head, torso and legs. In the seated mode the head zone becomes the frame to support the back rest.

[0005] At least one of the zones is formed by cushioning over a rigid base. The rigid base serves the function of a structural frame without the complexity, bulk and weight normally associated with a conventional frame. Where the head zone has a rigid base, it can serve to hold the torso zone erect to provide chair-like back support. The correct angular relationship between the back rest and support may desirably be maintained by one or more releaseable cords or belts that are attached to the lower edge of the back support and the lower edge of the head zone when those two zones are partially folded back on one another.

[0006] Shade may be provided by an integrated hood.. The hood is hingedly secured between the head and torso zone. Opaque fabric is provided to limit the amount of sun which can penetrate. At least two bows are sewn into or otherwise attached to the hood fabric. When the outermost bow is extended the other bows are deployed by the movement of the fabric to form a sun shelter over the head zone. When the invention is used on the seating mode, the hood is first extended on struts that are carried in fittings attached to the torso or head zones. The hood is drawn away from its stowed position to extend a sufficient distance to provide clearance for the head of a seated user. Since the extension of the hood may expose the users neck to direct sun under some conditions, a sun drape is desirably provided in a zippered pocket along the lower edge of the hood. Deploying the drape allows it to fall into the gap caused by extending the hood and thereby providing protection for the users neck and back at virtually every sun angle.

### **DETAILED DESCRIPTION**

[0007] Fig. 1 shows a preferred embodiment of the invention in which the leg 10 torso 12 and head 14 zones are formed by fabric covered foam pads 16. Closed cell Polyurethane foam is preferred for its combination of resilience and lack of

moisture uptake. The fabric protects the foam from soiling and abrasion and presents a smooth surface to the user. Nylon or polyester fabric are especially desirable with the invention. In addition to enclosing and protecting the foam, the fabric connects between the zones. The fabric is attached to the adjacent pads along a single sewn line to form a fabric hinge between the head and torso zones and between the torso and leg zones.

[0008] A hood 20 is attached to the torso zone 12 and can be deployed as shown in Fig. 1. The manner of attachment and adjustment of the hood will become more apparent in the description of the following figures.

[0009] Referring to Figure 1A, the function of the fabric hinges 18 is illustrated. The hinges allow the mat to be folded for carrying and storage. The hood is collapsed and folded between the leg and torso zones. Then the head zone is folded back to be attached overlying the torso pad. A carry strap is attached near the fabric hinge between the head and torso zones. This allows the mat to be carried over the user's shoulder. When folded (See Figure 1B) the three pads are held together by attaching the strap from a back rest restraint 24 (which may take the form of a strap to be described hereinafter) to a buckle on the undersurface of the leg pad. In addition two Velcro retention straps 28 hold the sides of the mat together.

[0010] Referring to Figure 2, the mat is shown in its backrest configuration. The head zone 14 is folded toward the torso zone until an A frame shape is obtained. The desired spacing between the lower ends of the head pad and torso pad is maintained by the back rest restraint strap 24 (See Figure 2 A). Also shown in Figures 2 and 2A is the seated position for the hood 20. To create clearance for the user's head, the hood 20 can be extended on extension struts 30 which allow the hood to be lifted at least 6 inches from the junction of the head and torso pads. A channel with an enlarged head is secured and the hood strut and attached to opposite sides of the back base element. The enlarged head is sized in a manner so

that the walls of the head frictionally engage the strut so that the strut and the connected hood stays in any selected position. The channel may be made of Nylon for strength and resilience.

[0011] The rearmost edges 32 for the hood can optionally contain a zippered pocket on its periphery. When unzipped a stowed sun drape is reveal a sun drape (not shown). The sun drape is a quantify of fabric that is attached only along one edge at the margin of the hood. When deployed it falls to cover the gap between the extended hood and the back rest (torso zone 12) so that the users head neck and shoulders are protected. The use of the sun drape is helpful especially in low sun angles such as late in the afternoon when the sun would otherwise beat directly on the users, neck, head and back.

[0012] Figure 3 Shows a second embodiment of the mat according to the invention. In this embodiment th special needs for an infant are provided for. The mat has threes zones (head 14, torso 12 and leg 10) but the pads are much smaller and are surrounded by pad extensions 40, 42, 44, 46 and 48 that are joined to the pads by fabric hinges 50, 52, 54, 56 and 58. These pad extension are optimally approximately 4 to 6 inches in width. When un-deployed the create a large flat padded surface. However for protecting sleeping children, or wherever an infant is likely to roll about and roll off of the pads, then the extensions can be secured a right angle to the pads by folding the pad extensions up to form soft restraints for the infant. When deployed the extensions also act as dirt guards to block dirt or sand from getting onto the pads. The extensions are held upright by restraint closures 60, 62, 64 and 66 at each corner.

[0013] The infant embodiment also uses a different form of central closure (See Figs 3A and 3B). A central closure strap is threaded through a closure slot in the leg pad and secured on the underside of the pad be matching closure strap and pad velcro parts (not shown).

[0014] The infant mat also admits of the use of a zippered pocket on the hood (not shown). In this application pocket is formed on the forward margin of the hood. The pocket can contain fabric for shape or insect netting. The fabric or netting is secured within the pocket opening along one edge, so that when deployed it drapes down to close the opening between hood and pad to protect the head of the child inside.

[0015] Figures 4 and 4A show the mechanical features of the invention illustrated in Figure 1, Figure 1A and Figure 1B. Figure 4 illustrates the use of a rigid base element 80 for the pads. The use of tempered hard board (such as Masonite) is satisfactory for this element. Where rigid bases are utilized, the three zones may be connected together using hinges that supplement or replace the fabric hinges of Figure 1. A foam pad (not shown) is secured to each of the bases. The users side of the base elements and the entire assembly covered with fabric to create the appearance of the pads in Fig. 1. The pads may desirably have a peripheral zipper for use in installation and/or replacement of the foam. All three zones may use a rigid base as illustrated. In most instances the leg pad would not have rigid materials because rigid support is not necessary to serve the structural function of the leg pad and because the users full weight bears on this section when the device is set up for back rest support. However, the use of rigid support is preferable for the back rest and head pad because, in the first instance the back rest supports the user and in the case of the head pad, the rigidity is desirable to make the head pad support the backrest by acting as a leg and prop for the back rest.

[0016] The hood support is shown be made up of pivotal bows 82 secured to a pivot joint. The bows at the forward and rearward margins of the hood determine the shape of the hood. The hood is shown to be rounded in the present embodiment but may be squared off by bows of the appropriate shape. Although 3 strap bows are illustrated, where desired, the third (central) bow may be a resilient wire sewn into the canopy of the hood. and extending from or near the pivot joint.

# **I CLAIM:**